Daily Diary Report by Bid Item

Contract No.: **04-0120F4**
Diary #: **570** **Const Calendar Day:** 973 **Date:** **08-May-2012** **Tuesday**
Inspector Name: **Bruce, Matt** **Title:** **Transportation Engineer**
Inspection Type: Continuous
Shift Hours: 07:00 pm 05:30 am **Break:** 00:30 **Over Time:** 02:00
Federal ID:
Location:
Reviewer: **Schmitt, Alex** **Approved Date:** **Status:** Submit

04-0120F4
04-SF-80-13.2/13.9
Self-Anchored
Suspension Bridge

Weather

Temperature **7 AM** 60 - 70 **12 PM** 70 - 80 **4PM** 70 - 80
Precipitation 0.00" **Condition** Mostly sunny to clear

Working Day ☐ If no, explain:

Diary: Dispute ☐

Work description.

Checked the following cable band layout marks placed on the compacted North Mainspan cable tonight/tomorrow morning with the assistance of Douglas Wright, Victor Altamirano, and David Chung:

1.) Top dead center marks placed on the compacted cable at the 1.5m offsets
2.) Arc length for the rotational camber centerline at the 1.5m offsets
3.) Rough distance check on the 1.5m offsets from the cable band centerline
4.) Straightness of the rotational camber centerline between the 1.5m offsets

The North Mainspan cable band layout was approved Wednesday morning May 9th for cable bands 44N to 100N. Steel temperatures didn't match the ambient until 12:30am, which is when ABF proceeded to mark the top dead center on the compacted cable. After sunset at 8:08pm the cable steel was continuously monitored as ABF was eager to get started. It was observed that the compacted cable retained heat for a longer period than the cable strands. The predominate temperature differential during this time was 7F where the ambient temperature was 54F and steel temperature was 62F.

The only other issues for this shift were for ABF to correct the arc length for cable band 44N and the top dead center/arc lengths for cable band 52N. The official time of sunset per weather.com was 8:08pm and sunrise time was 6:05am for this shift.

Myself and Victor measured the top dead center of the cable where I took most of the measurements. Victor also took a few measurements as I checked his numbers from the measurements before proceeding to the next 1.5m cable band offset mark. As myself and Victor progress downhill on the North Mainspan we measured the cable steel temperatures intermittently. The temperatures were on average 56F and the ambient was holding steady at 54F. David Chung and Doug checked the arc lengths, 1.5m offset distances, and rotational centerline straightness. See Doug and David's diaries for more details of this inspection item.

The layout work was completed at 4:00am and I signed the ABF buy-off sheet at the end of the shift. Before the layout work commenced I cautioned ABF engineer Zach Lauria on prematurely starting until the ambient and steel temperatures matched each other. I made it very clear that any work performed where the temperatures weren't settled out would be done at their own risk. I also told him that some top dead center marks on the North Mainspan/Sidespan would be checked again at night and during the day to verify the correct positions. Also to gauge the behavior of the cable when subjected to thermal cycles. The sheet was signed due to the fact that the steel temperatures went down at the time of marking the top dead center of the North Mainspan cable.

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- Wrote an email to pertinent Team Cable members briefing them on the status of the cable band layout as it pertains to cable band placement/erection during the day.

- Completed the inspection checklist for the Top Dead Center marks for the North Mainspan cable bands 44N through 100N.

Attachment

Ambient and steel temperatures measured approximately at cable band 44N on the south side of the cable just prior to starting the layout work.

Measured steel temperature taken at cable band 64N Uphill.

Close-up of a top dead center measurement taken at 62N Downhill where the diameter was 795mm and the distance from plumb was 4mm counterclockwise east

ABF and Caltrans crews laying-out and checking the rotational camber for the North Mainspan cable bands.

Ambient and steel temperatures measured approximately at cable band 108N on the north side of the cable just prior to starting the layout work.

Check of the anemometer vs the other thermometer used to measure steel temperatures when measuring the ambient temperature only.

Ambient and steel temperatures measured approximately at cable band 108N on the south side of the cable just prior to starting the layout work.

Check of the anemometer vs one of the thermometers used to measure steel temperatures when measuring the ambient temperature only.

Steel temperature just prior to starting the layout work on the North Mainspan near cable band 44N after cautioning the ABF engineer.